

**ABSTRACT**  
**DETECTOR DEVICE**

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The present invention relates to a detector device and, more particularly, to a detector device comprising a self-diagnosis means for monitoring the correct performance or otherwise of the device. During testing,  
10 the device, which normally operates using the Doppler shift principle, is arranged to influence the phase and/or amplitude of the received signal in response to an applied test signal. The received signal may be a Doppler shifted version of a transmitted signal.  
15 Combining the phase and/or amplitude shifted version of the received signal and the signal from the local oscillator produces an IF signal that is indicative of the phase and/or amplitude shift. If the device is operating correctly, that signal should have a  
20 predetermined range of characteristics. If the self-diagnosis means determines that the produced signal falls outside of the predetermined range of characteristics, an alarm is raised to alert, for example, maintenance personnel to the problem.

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